

Class 6

Chapter – 2 Globe: Latitudes and Longitudes (Geography)

- **Globe** - Globe is a true model (miniature form) of the earth .



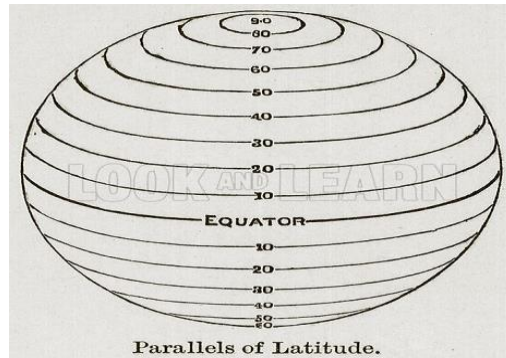
- **Axis** - A needle is fixed through the globe in a tilted manner, which is called its axis. Two points on the globe through which the needle passes are two poles – North Pole and South Pole.



- **Equator** - Another imaginary line running on the globe divides it into two equal parts. This line is known as the equator. The northern half of the earth is known as the Northern Hemisphere and the southern half is known as the Southern Hemisphere..



- **Parallels of Latitude** - All parallel circles from the equator up to the poles are called parallels of latitudes. Latitudes are measured in degrees.



- **Important parallels of Latitude** - There are four important parallels of latitudes—
 - (i) Tropic of Cancer ($23\frac{1}{2}^{\circ}$ N) in the Northern Hemisphere.
 - (ii) Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S) in the Southern Hemisphere.
 - (iii) Arctic Circle at $66\frac{1}{2}^{\circ}$ north of the equator.
 - (iv) Antarctic Circle at $66\frac{1}{2}^{\circ}$ south of the equator

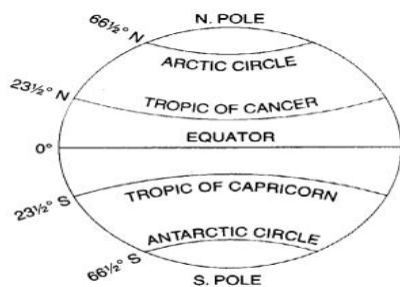
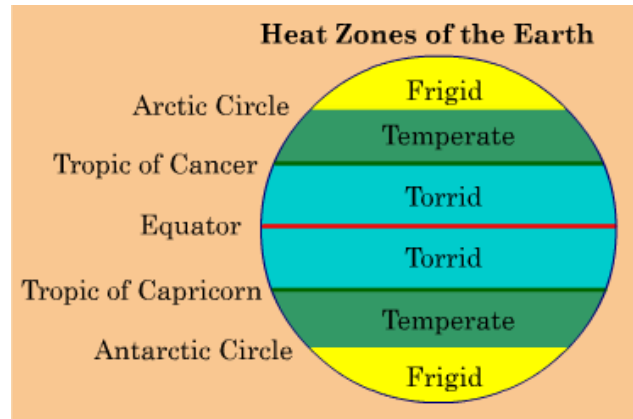


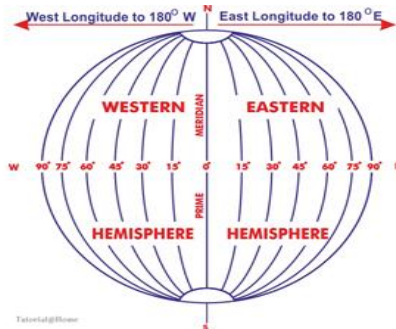
Fig. 2.3. Major parallels of latitudes.

- **Heat Zones of Earth –**

1. **Torrid Zone** – The mid-day sun is exactly overhead at least once a year on all latitudes in between the Tropic of Cancer and the Tropic of Capricorn. This area, therefore, receives the maximum heat and is called the Torrid Zone.
2. **Temperate Zone** – The angle of the sun's rays goes on decreasing towards the poles. As such, the areas bounded by the Tropic of Cancer and the Arctic Circle in the Northern Hemisphere, and the Tropic of Capricorn and the Antarctic Circle in the Southern Hemisphere, have moderate temperatures. These are, therefore, called Temperate Zones.
3. **Frigid Zone** – Here the sun does not rise much above the horizon. Therefore, its rays are always slanting and provide less heat. These are, therefore, called Frigid Zones (very cold).



- **Longitudes** – These lines of references are called the meridians of longitude, and the distances between them are measured in ‘degrees of longitude.



Difference between Latitude and Longitude

S.NO	Latitude	Longitude
1.	They run from west to east.	They run from north to south.
2.	They are parallel to each other	They are not parallel .
3.	At Zero degree Equator is located.	At Zero degree Prime Meridian is located which passes through Greenwich.
4.	Total latitudes 180 (90 North & 90 South).	Total longitudes 360 (180 East & 180 West).
5.	They are known as parallels of latitude.	They are known as meridian of longitude.

LONGITUDE AND TIME

- The best means of measuring time is by the movement of the earth, the moon and the planets.
- The sun regularly rises and sets every day, and naturally, it is the best time-keeper throughout the world.
- Local time can be reckoned by the shadow cast by the sun, which is the shortest at noon and longest at sunrise and sunset.

- As the earth rotates from west to east, those places east of Greenwich will be ahead of Greenwich time and those to the west will be behind it.
- The earth rotates 360° in about 24 hours, which means 15° an hour or 1° in four minutes. Thus, when it is 12 noon at Greenwich, the time at 15° east of Greenwich will be $15 \times 4 = 60$ minutes, i.e., 1 hour ahead of Greenwich time, which means 1 p.m.
- But at 15° west of Greenwich, the time will be behind Greenwich time by one hour, i.e., it will be 11.00 a.m. Similarly, at 180° , it will be midnight when it is 12 noon at Greenwich.

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WHY DO WE HAVE STANDARD TIME?

- In India, the longitude of $82\frac{1}{2}^\circ$ E ($82^\circ 30'E$) is treated as the standard meridian.
- The local time at this meridian is taken as the standard time for the whole country. It is known as the Indian Standard Time (IST).
- India located east of Greenwich at $82^\circ 30'E$ is 5 hours and 30 minutes ahead of GMT. So it will be 7:30 p.m. in India when it is 2:00 p.m. noon in London.
- in Russia, there are as many as eleven standard times
- The earth has been divided into twenty-four time zones of one hour each. Each zone thus covers 15° of longitude.